

# *Smart Production*

***Smart Production*** enables people throughout an organization to use a systems approach to product and service design, with the goals of:

- “mimicking” natural processes by using renewable materials and energy inputs, and eliminating the use of toxic and non-renewable materials;
- enhancing a business’s long-term economic viability;
- producing products that can be recycled and that have low life-cycle environmental impacts; and
- eliminating discharges of pollutants to air, water and land.

# *Design Decisions*

## *Life-cycle Focus*

### *Product/Service*

Design product/service for optimum life, utility and/or value

- Optimize serviceability
- Design product or its parts to be recycled, remanufactured or upgraded

### *Life-cycle Environmental Impact Analysis*

Conduct product life-cycle environmental impact analysis to include materials extraction and transportation, energy use, production processes, sales, and ultimate disposition

### *Redesign*

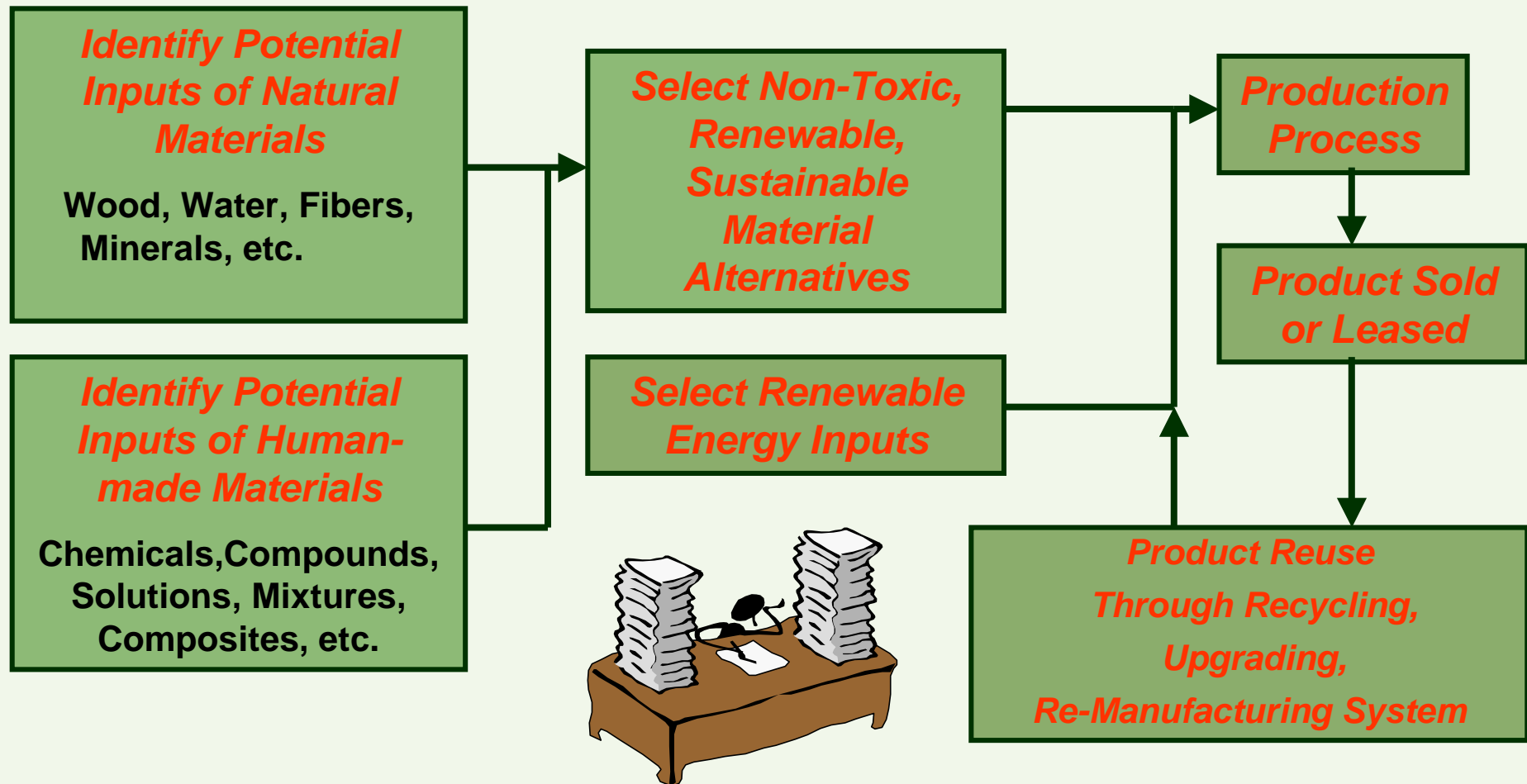
Based on life-cycle environmental impact analysis redesign product/service as needed to reduce and eliminate impacts

- Dematerialize
- Reduce energy inputs, etc.



# ***Production Decisions***

## ***Materials and Energy Focus***



# *“Waste” Management Decisions*

## *Recycling Focus*

